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## Volcanic Ash: Health Effects and Protective Measures

As many Idahoans remember, the May 18, 1980 eruption of Mt. St. Helens resulted in heavy ash fall and poor air quality in many areas including Idaho. Renewed rumblings have many wondering how a volcanic eruption 25 years later might impact air quality and public health in our state and what can be done to protect Idahoans from exposure to volcanic ash.

### Potential Health Effects

- All residents of areas where there is ash fall are at risk of breathing volcanic dust or getting ash in their eyes.
- Although volcanic ash is not poisonous, it can cause short-term symptoms such as runny nose, sore throat, chest tightness, dry cough, irritated or itchy eyes, and minor skin irritations.
- Short-term breathing of volcanic ash is not known to pose a significant health hazard for healthy individuals.
- Exposure to ash can make breathing difficult for sensitive populations such as children, the elderly, and those with respiratory conditions. People with chronic bronchitis, emphysema, and asthma are most at risk.
- Getting ash in the eyes can cause immediate irritation.
- Symptoms of breathing volcanic ash normally disappear once the ash clears.
- Studies of the effects of exposure to volcanic ash in Oregon and Washington following the 1980 eruption showed no severe or lasting health effects in people living in areas of ash fall.

### Precautions - What You Can Do

- Minimize exposure to airborne ash. Stay inside as much as possible. Keep children indoors when ash is visible outdoors. Avoid strenuous activities.
- If you have asthma or another respiratory condition, make sure you have an adequate supply of medication, follow your asthma or other breathing management plan, and contact your doctor if you are having breathing or other health-related troubles.
- Keep all doors and windows closed when ash accumulation is heavy.
- If you must go outside, wear a high-efficiency face mask when outside to reduce inhalation of ash particles. *Note:* Masks may make breathing more difficult for persons with existing

### What is Volcanic Ash?

Volcanic ash consists of small jagged pieces of rocks, minerals, and volcanic glass the size of sand and silt (less than 2 millimeters (1/12 inch) in diameter). Very small ash particles can be less than 0.001 millimeters (1/25,000th of an inch) across. Unlike the soft fluffy material created by burning wood, leaves, or paper, volcanic ash is hard, does not dissolve in water, is extremely abrasive and mildly corrosive, and conducts electricity when wet.

Ash falls vary widely in intensity, size of the ash particles, and the degree to which light from the sun is obscured or blocked completely. Ash falls may be accompanied by loud thunder and lightning and a strong sulfur smell.

respiratory conditions. Remain inside until ash clears if you have a respiratory ailment.

- If no high-efficiency face mask is available, improvise. Wear a fabric mask made from handkerchiefs, cloth, or clothing to filter out larger ash particles. Dampen fabric with water to improve effectiveness.
- In fine-ash environments, wear goggles or corrective eyeglasses instead of contact lens to protect eyes from irritation.
- Keep pets indoors. If pets go outside, brush or vacuum them before letting them back indoors. If possible, move livestock to a barn or other outbuilding and make sure they have clean food and water.
- When cleaning up ash outside, wear long sleeves and pants, and a dust mask. To dispose of ash, bury, mulch, or mix into soil.
- Handle ash in open, well-ventilated areas. Dampen ash in your yard to prevent billowing up into the air and make cleanup less hazardous. When cleaning up ash, do not use leaf blowers, reversed vacuum hoses, or other tools that stir up the ash.
- Protect your home from ash infiltration by replacing disposable furnace filters or cleaning permanent filters frequently.